Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

Reserve
1
9
4M

Wartime Changes in the Financial Structure of Agriculture

LIBRARY
CURRENT SERIAL RECORD
☆ MAR 17 1945 ☆
U. S. DEPARTMENT OF AGRICULTURE

Bureau of Agricultural Economics
United States Department of Agriculture

Issued February 1945

MISCELLANEOUS PUBLICATION No. 558

Foreword

The report on which this statement is based was an attempt to measure the impact of World War II on the financial structure of agriculture in the United States. A 30-billion-dollar increase in the equities of all owners of farms and all tenant farmers during this war has seemingly placed agriculture in a strong financial position. Moreover, about 12 billion dollars of cash and other liquid intangible assets owned by farmers on January 1, 1944 give agriculture as a whole an added flexibility for meeting post-war adjustments.

But it must be remembered that a major part of the increase in equities is the result of higher prices and higher valuation of farm real estate. Equities in the future will be influenced greatly by the future level of prices as well as by the amount of debt that farmers incur and the uses they make of their accumulated war bonds, bank deposits, and currency. How farmers spend or use their wartime accumulations may well influence the financial welfare of farm families for the next two or three decades.

An understanding of the many and diverse effects of the war on agriculture and rural people is necessary to the success of any future effort directed toward making and keeping agriculture a healthy segment of our national economy. It is hoped that this statement will contribute to that end.

H. R. Tolley
Chief, Bureau of Agricultural Economics.

Explanatory Note

This is a summary of a more comprehensive report called Impact of the War on the Financial Structure of Agriculture issued in September 1944, copies of which may be obtained from the Bureau of Agricultural Economics, United States Department of Agriculture. The project for developing materials for this report was organized in the office of the Chief of the Bureau of Agricultural Economics under the leadership of Bushrod W. Allin.

The members of the project committee were the following: Norman J. Wall, Chairman; Wylie D. Goodsell, Charles A. Gibbons, Richard K. Smith, Albert B. Genung, Albert R. Johnson, Donald C. Horton, Alvin S. Tostlebe, Roy J. Burroughs, Harald C. Larsen, Lawrence A. Jones, Lucy R. Hudson, Sarah L. Yarnall.

Data on the inventory of livestock, crops, machinery, and household equipment were prepared under the direction of the following persons: Livestock—C. L. Harlan; crops—C. E. Burkhead, T. J. Kuzelka, H. L. Rasor, J. A. Hicks; machinery—Selma F. Goldsmith, Harry C. Norcross, Roger F. Hale, Albert P. Brodell; household equipment—Grace M. Angle, Dorothy N. Chellis.

Contents

	Page
Introduction	4
Owner equities increased 30 billion dollars in 4 years	5
Rise in prices chief factor in increase of owner equities	6
Income to operators increased by more than 7 billion dollars	7
Real estate is the farmer's principal asset	11
Non-real-estate physical inventories on farms	13
Regional variations in non-real-estate inventories	14
Intangible assets have increased also	16
Liabilities have decreased somewhat	19
Mortgage debt varies in significance for different farms	20
Low interest rates reduce burden of debt	24
Significance of mortgage debt depends also on lending facilities	24
Non-real-estate debt	25
Economic forces—World War II vs. World War I	27
The post-war view	28
Flexibility of farmers' finances may aid later post-war adjustments	30
Future financial structure dependent upon national policies	31
Summary	31

Washington, D. C. Issued February 1945

Wartime Changes in the Financial Structure of Agriculture

By Alvin S. Tostlebe, Donald C. Horton, Roy J. Burroughs, Harald C. Larsen, Lawrence A. Jones, and Albert R. Johnson

Under the direction of
Norman J. Wall, Head, Division of Agricultural Finance

Introduction

War has a profound effect on agriculture, just as it has on other basic industries. Increased wartime demand for food and fibers causes more funds to flow to agriculture; meanwhile higher production expenses, increased taxes, and other outlays result in a greater outflow. The market value of assets like land, livestock, and crop inventories rises along with other prices. Farmers' debts change as increased income is used to pay old debts and as new debts are incurred for such purposes as buying land, farm equipment, and livestock. Thus not only the amount but also the composition of farmers' assets and liabilities are affected directly by these wartime developments.

During and immediately after the period of World War I farmers in the United States experienced a boom, accompanied by considerable speculation in land and general inflation in commodity prices. Then after the war they encountered the collapse of prices and consequent distress, some results of which persisted through most of the twenties and early thirties. Of course the physical assets did not change greatly, but price and equity relationships were violently disrupted. A balance sheet struck during the boom would have shown a seemingly strong and liquid position despite a rapidly mounting volume of debt. After the deflation had set in a similar balance sheet would have shown that assets had greatly depreciated, liquidity had mostly disappeared, and that a huge volume of debt had remained. This debt became a heavy financial burden with the receding tide of commodity prices and farm asset values.

Such a balance sheet at any given time presents an interesting still picture of the financial structure of agriculture. It reveals that complex of property rights under which agriculture's assets are administered and its earnings in part are distributed. Needless to say, this pattern of the financial set-up influences the whole conduct of the farm business: the stability of ownership of land and equipment, the efficiency of production, and to a large degree the distribution of farm income. The financial structure thus becomes a matter of interest not only to farmers but also to the whole community, especially

to those who sell goods to farmers and to all those agencies whose broad purpose is to promote a balanced economy within the country.

So far during this war, agriculture has again felt mainly the stimulating influences of wartime buying of foods and fibers made possible on an enormous scale by the huge expansion of credit incident to the financing of a great war—even though modified by certain brakes and restraints set up by the system of price control. On the whole, this is the period of stimulus and expansion, which usually occurs while a war is in full blast. It seems timely, therefore, to draw up a list of assets and equities now, in order to see clearly what significant changes may have developed in the country's farm business as a whole, so far, by the pressure of this second World War, and what the current tendencies may indicate for the future.

The so-called balance sheet which follows is designed to show, for the last 4 years, the principal changes that have occurred in the financial position of the farm business, considered as one large industry.[1]

In a country as vast and as diversified in type of farming as the United States, financial changes are not entirely uniform either among the various areas or among individuals. Therefore, although the consolidated comparative balance sheet and income statement which follow are true of the aggregate, they do not reveal differences in circumstances of States or regions, or of individual farmers. The same qualification applies to the description of effects of individual actions and of national policies.

Owner Equities Increased 30 Billion Dollars in 4 Years

It appears that agriculture in the United States, as measured by the dollar value of its physical goods, grew from a 49-billion-dollar industry to a 70-billion-dollar industry during the 4 years ended January 1, 1944. If certain intangibles owned by farmers are added, such as cash, deposits, and United States savings bonds, agriculture could be rated as a 54-billion-dollar industry in 1940 and an 83-billion-dollar industry in 1944.

During these 4 years the equities of all owners of farm land and of all tenant farmers in this vast industry appear to have increased nearly 30 billion dollars, whereas the holdings of mortgagees and other lenders to agriculture were reduced half a billion or more.

Thus, on the whole, the financial position of the farm business has strengthened during the war years. It is true, of course, that many farmers have not done as well as the group; presumably others have fared better.

---

[1] A more complete discussion of the individual items in this tabulation is given in the full report. In this summary, only brief allusion is made to these items.

Rise in Prices Chief Factor in Increase of Owner Equities

A rise in prices has been the chief factor in the increase in assets, and in the increase in owner equities. The farm physical plant has increased only to a limited extent during these 4 years. The increase has been greatest in livestock. Some increase is shown in crop inventory but virtually none in land, buildings, and machinery.

In contrast, the *valuations* of tangible farm assets have increased sharply. The prices used in these valuations are estimated to have increased as follows during the 4-year period: Land, 36 percent; meat animals, 85 percent; crops, 126 percent; farm machinery and vehicles, 24 percent.

Higher prices account for about 19.7 billion dollars of the 21.1-billion-dollar increase in the valuation of tangible farm assets. The remaining increase of 1.4 billion dollars reflects a rise in physical working capital. At the same time that valuations of tangible assets were thus increasing, intangible assets consisting of United States savings bonds, cash, bank deposits, and warehouse receipts also increased some 8.0 billion dollars. These increases in assets, totaling about 29.1 billion dollars, together with a debt reduction of 500 to 800 million dollars, gave proprietors an interest in agriculture on January 1, 1944, that was nearly 30 billion dollars larger than on January 1, 1940 (table 1).

TABLE 1.—*Consolidated comparative balance sheet of farms of the United States 1940–44* [1]

Item	Jan. 1, 1940	Jan. 1, 1941	Jan. 1, 1942	Jan. 1, 1943	Jan. 1, 1944	Net change 1940–44	
Asset items:	*Million dollars*	*Million dollars*	*Million dollars*	*Million dollars*	*Million dollars*	*Percent*	*Million dollars*
Tangibles:							
Real estate	33,642	34,026	36,611	39,963	45,592	+36	+11,950
Non-real-estate:							
Livestock	5,132	5,320	7,042	9,541	9,526	+86	+4,394
Machinery and equipment	3,135	3,319	3,959	4,157	4,198	+34	+1,063
Crops [2]	2,339	2,493	3,409	4,576	5,595	+139	+3,256
Household equipment	4,275	4,338	4,513	4,620	4,699	+10	+424
Intangibles:							
Currency and deposits	4,030	4,478	5,462	7,362	9,663	+140	+5,633
United States savings bonds	230	331	486	1,143	2,390	+939	+2,160
Warehouse receipts	323	470	394	490	513	+59	+190
Other (in co-ops) [3]	660	660	660	660	660	±	±
Total assets	53,766	55,435	62,536	72,512	82,836	+54	+29,070
Equity Items:							
Liabilities:							
Real estate mortgages	6,586	6,534	6,484	6,117	5,635	−14	[4] −951
Non-real-estate debt:							
To principal institutions [5]	1,940	2,233	2,331	2,512	2,360	+22	+420
To others [6]	1,455	1,675	1,748	1,464	1,180	−19	−275
Proprietors' equities:							
Farmers' equity in non-real-estate [7]	16,729	17,501	21,846	28,573	33,704	+101	+16,975
Landowners' equity in real estate	27,056	27,492	30,127	33,846	39,957	+48	+12,901
Total equities	53,766	55,435	62,536	72,512	82,836	+54	+29,070

[1] All figures are estimated, the margin of error varying with the items.
[2] Crops stored in unbonded warehouses escape inclusion either in inventory or in warehouse receipts. Likewise commodities in bonded warehouses which are not covered by a CCC loan agreement escape the estimate.
[3] Data for 1936–38.
[4] Because of rounding of figures this difference is 1 million dollars less than a figure which appears in the text.
[5] Gross; includes debt underwritten by CCC.
[6] These figures are believed to be reasonable but they lack supporting evidence.
[7] Including intangibles.

Various commonly used financial yardsticks show the strengthened condition of the farm business. For example, the ratio of quick assets to known non-real-estate debt was 2.4 to 1 at the beginning of 1940 but had risen to 5.3 to 1 at the beginning of 1944. Livestock values alone exceeded such debts in the ratio of 2.6 to 1 on January 1, 1940, but 4 years later livestock exceeded non-real-estate debt by 4.0 to 1. The ratio of real estate valuation to mortgage debt rose from 5.1 to 1 on January 1, 1940 to 8.1 to 1 on January 1, 1944. Many farmers could easily pay their near-term obligations out of quick assets or from a portion of their other working capital. In general, the more distant obligations of farmers are also moderate relative to fixed assets.

It is important that farmers comprehend the nature of the changes in these assets and equities. Some of the wartime accumulations of savings bonds and cash should be regarded as reserve funds to replace worn-out or obsolete farm plant and equipment. These accumulations will permit the needed adjustments in farming programs that are in keeping with the future demand for farm products. Cautious proprietors will consider the possibility that the 19.7-billion-dollar increase in tangible farm assets resulting merely from price advances may be ephemeral. It can disappear as quickly as it came.

Income to Operators Increased by More Than 7 Billion Dollars

Increase in farm income has been the chief cause of the rise in intangible farm assets and of the reduction of farm debt.

The 4-year income statement which follows (table 2) may be viewed as the record of production and marketing transactions that have affected the balance sheet within that period. To a large extent it ignores capital transactions or any asset write-ups that are due merely to price changes. For purpose of comparison a table is also given showing like data during the first World War (table 3).

The income statement for 1940–43 reflects directly how war has stimulated the flow of funds into and out of agriculture. From 1940 to 1943 cash farm income, from products sold and from Government payments, rose from 9.1 billion dollars to nearly 19.9 billions, an increase of 119 percent. Moreover, during those years gross income from agriculture increased faster than production costs, excluding labor. As a result, total net return to labor and investment increased from about 6.5 billion dollars in 1940 to 15.8 billions in 1943. The final net return to farm operators and their families, from farm operations plus Government payments, increased from about 4.8 billion dollars in 1940 to 12.4 billions in 1943.

The increase in income was due in part to greater output but in large measure it was due to higher prices. Production, as measured by

volume of farm marketings and home consumption, increased 17 percent during the period, while prices received for farm products rose 92 percent (1910–14=100). Over and over, this phenomenon of rising prices in wartime manifests its effect upon the farm business. Probably in no other industry are the economic consequences of a radically

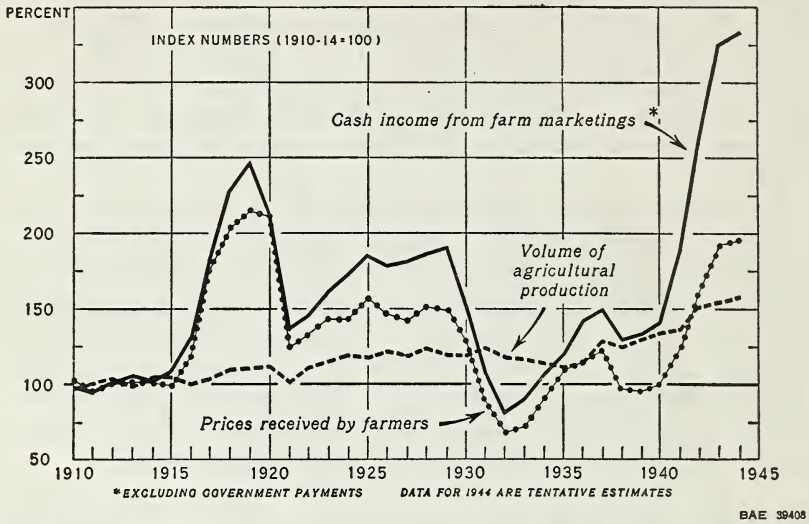


FIGURE 1.—AGRICULTURAL PRODUCTION, PRICES, AND INCOME, UNITED STATES, 1910–44

From 1915 to 1918 cash farm income from marketing increased from 6.4 billion dollars to 13.5 billion dollars, or 110 percent. From 1940 to 1943 cash farm income from marketing and from Government payments increased from 9,106 million dollars to 19,924 million dollars, or 119 percent. During both wars the increase was due mainly to higher prices but partly to increased production. From 1915 to 1918 prices received by farmers increased 106 percent and agricultural production, so far as measured by marketings and home consumption, increased 5 percent. Comparable increases from 1940 to 1943 were 92 and 17 percent.

altered price level more far reaching. Figure 1 shows the relative changes of production, prices, and income during the two war periods.

It is apparent that this income has had its origin chiefly in an enlarged demand for farm products from our own civilian population with its increased buying power, plus the buying for military needs and lend-lease.

TABLE 2.—*Consolidated income statement for farms of the United States, 1940–43* [1]

Item No.	Item	1940		1941		1942		1943	
	Gross income from agriculture:	*Million dollars*		*Million dollars*		*Million dollars*		*Million dollars*	
1	Cash receipts from farm marketings	8, 340		11, 157		15, 374		19, 252	
2	Value of products retained on farms for home consumption	1, 232		1, 399		1, 686		2, 027	
3	Rental value of farm homes	624		657		717		787	
			10, 196		13, 213		17, 777		22, 066
	Nonlabor production costs:								
4	Feed bought	820		1, 086		1, 641		2, 262	
5	Livestock (except horses and mules) bought	461		574		766		732	
6	Fertilizer and lime bought	260		295		350		425	
7	Vehicle operation	568		631		706		724	
8	Depreciation and maintenance	1, 093		1, 232		1, 367		1, 442	
9	Interest on non-real-estate debt [2]	235		250		220		218	
10	Other operating expenses	649		682		850		985	
11	Taxes on real estate and tangible personalty	446		452		451		448	
			−4, 532		−5, 202		−6, 351		−7, 236
12	Adjustment for changes in inventory [3]		+82		+299		+862		+260
13	Net income from agriculture not including Government payments		5, 746		8, 310		12, 288		15, 090
14	Government payments [4]		+766		+586		+697		+672
15	Total net return to labor and investment		6, 512		8, 896		12, 985		15, 762
	Return to labor:								
16	Hired labor (cash and perquisites)	1, 000		1, 197		1, 566		1, 933	
17	Farm family labor								
18	Operators' labor								
	Net return to investment in farming:								
	Return to capital—								
19	Net return to landlords not on farms [5]	390		584		889		1, 125	
20	Mortgage interest	296		294		287		271	
21	Capital return to operators								
	Return to management—								
22	Enterprisers' profit and loss								
23	Total to operators [6]	4, 826		6, 821		10, 243		12, 433	
	Total net return to labor and investment		6, 512		8, 896		12, 985		15, 762

[1] The margin of error varies from item to item.
[2] Includes an allowance for interest on one important unknown debt element.
[3] Market value, in terms of prices at the end of the year, of the increase or decrease in the quantities of crops on farms for sale or of numbers of livestock, whether or not for sale.
[4] Includes some payments that are comparable to certain returns included in item 1. Thus advances under CCC guaranteed loans are in item 1, whereas consumers' price subsidies to dairy and other farmers are included in item 14.
[5] After subtraction of taxes, estimated mortgage interest and other expenses paid by such landlords.
[6] Includes adjustment for changes in inventory. Difference between item 15 and the sum of items 16, 19, and 20. The distribution of item 23 to the respective shares belonging under items 17, 18, 21, and 22 has not been determined.

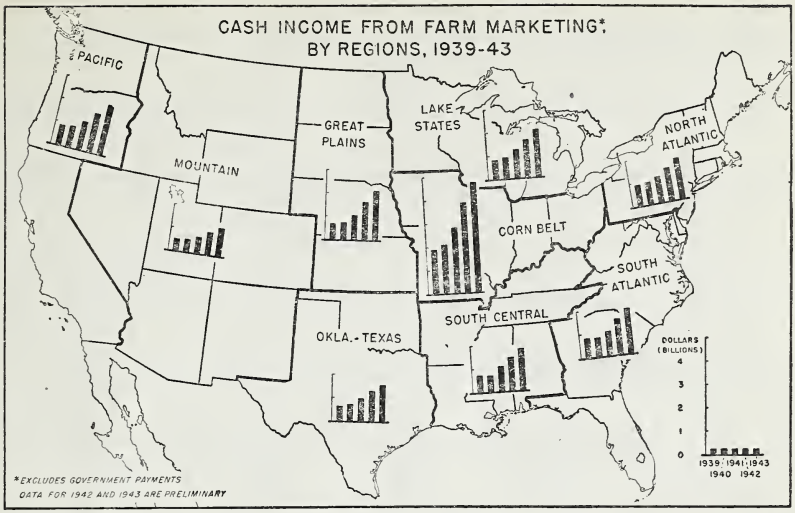
619396°—45——2

TABLE 3.—*Consolidated income statement for farms of the United States, 1915 and 1918* [1]

Item No.	Item	1915		1918	
	Gross income from agriculture:	*Million dollars*		*Million dollars*	
1	Cash receipts from farm marketings	6,403		13,461	
2	Value of products retained on farms for home consumption	1,131		2,153	
3	Rental value of farm homes	434		618	
			7,968		16,232
	Nonlabor production costs:				
4	Feed bought	411		1,106	
5	Livestock (except horses and mules) bought	205		513	
6	Fertilizer and lime bought	172		317	
7	Vehicle operation	46		190	
8	Depreciation and maintenance	7[illegible]6		1,206	
9	Interest on non-real-estate debt [2]	273		384	
10	Other operating expenses	437		780	
11	Taxes on real estate and tangible personalty	279		355	
			−2,609		−4,851
12	Adjustment for changes in inventory [3]		+73		+39
13	Net income from agriculture		5,432		11,420
14	Government payments		0		0
15	Total net return to labor and investment		5,432		11,420
	Return to labor:				
16	Hired labor (cash and perquisites)	815		1,335	
17	Farm family labor				
18	Operators' labor				
	Net return to investment in farming:				
	Return to capital—				
19	Net return to landlords not on farms [4]	366		797	
20	Mortgage interest	314		417	
21	Capital return to operators				
	Return to management—				
22	Enterprisers' profit and loss				
23	Total to operators [5]	3,937		8,871	
	Total net return to labor and investment		5,432		11,420

[1] The margin of error varies from item to item.
[2] Includes an allowance for interest on one important unknown debt element.
[3] Market value, in terms of prices at the end of the year, of the increase or decrease in the quantities of crops on farms for sale or of numbers of livestock, whether or not for sale.
[4] After subtraction of taxes and estimated mortgage interest and other expenses paid by such landlords.
[5] Includes adjustment for changes in inventory. Difference between item 15 and the sum of items 16, 19, and 20. The distribution of item 23 to the respective shares belonging under items 17, 18, 21, and 22 has not been determined.

The highest rate of increase in income occurred in the Great Plains States (the Dakotas, Nebraska, and Kansas), where it amounted to 214 percent during this 4-year period. But income was low there at the beginning, because of bad crop years. The smallest rate of increase was in the North Atlantic States—about 92 percent. Almost one-fourth of the total farm income in 1943 was received in the five Corn Belt States: Ohio, Indiana, Illinois, Iowa, and Missouri. The States showing farm income in excess of a billion dollars in 1943 were Iowa, 1,574 million dollars; California, 1,503 million dollars; Texas, 1,164 million dollars; and Illinois, 1,147 million dollars. The regional differences in cash farm income may be seen readily in figure 2.



BAE 43644

FIGURE 2.—The highest rate of expansion in cash farm income from marketing (excluding Government payments) occurred in the Great Plains States (the Dakotas, Nebraska, and Kansas), where the 1943 income was 297 percent of 1940 income. Income at the beginning of the period in this region, however, was relatively low because of low yields. The smallest rate of increase took place in the North Atlantic States, where the 1943 income was 186 percent of 1940. Almost one-fourth of the total cash farm income (excluding Government payments) in 1943 was received in the five Corn Belt States of Ohio, Indiana, Illinois, Iowa, and Missouri. The States receiving cash farm income in excess of a billion dollars in 1943 were Iowa, California, Texas, and Illinois.

Real Estate Is the Farmer's Principal Asset

Real estate is by far the farmer's most valuable single asset. The total value of farm land and buildings rose from 33.6 billion dollars in 1940 (Census figure) to an estimated 45.6 billions in 1944. The amount of land in use has remained relatively unchanged.

Real estate values had been stable through the 5-year period 1937–41 at about 85 percent of the 1912–14 average and 16 percent above the 1933 low. Then a stronger current of demand began to run through the land market. Prices began to rise rapidly from the latter part of 1941. During 1942 they rose about 10 percent and in the year ended March 1944 about 15 percent (fig. 3).

The whole rise in farm real estate values during the 4 years ended March 1944 amounted to 36 percent. This was about the same percentage rise as occurred during a like period of the first World War; that is, in the 4 years after March 1915. However, the average level of values in this more recent period has been only about four-fifths as high as it was in 1915–19. Surveys made by the Bureau of Agricultural Economics indicate that about two-thirds of all farms bought

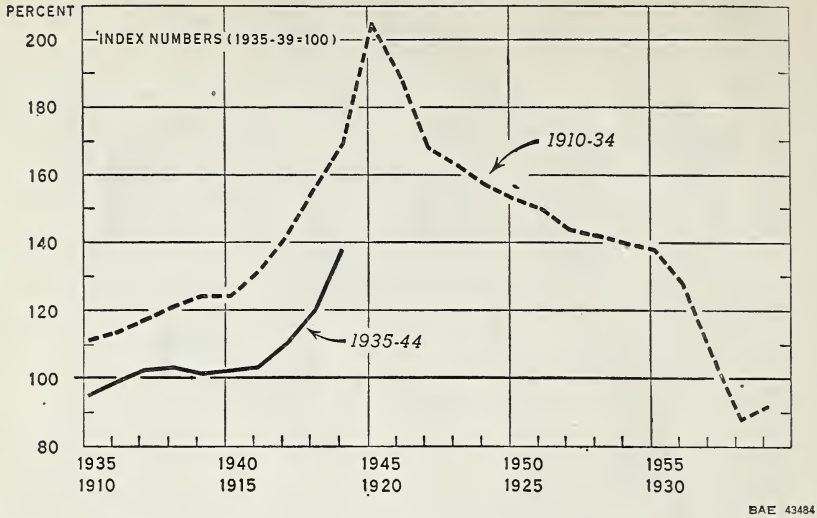


FIGURE 3.—FARM REAL ESTATE: AVERAGE VALUE PER ACRE, 1910-34 AND 1935-44

During and immediately following World War I, farm real estate values rose rapidly, reaching 170 percent of the 1912–14 average in 1920. Between 1920 and 1922 values dropped rapidly and from 1922 to 1930 a gradual decline occurred. Thereafter to 1933 a severe decline took place. In the 5-year period 1937–41 real estate values were fairly stable at a level 16 percent above the 1933 low and 85 percent of the 1912–14 average. In the latter part of 1941 prices began to rise rapidly. The rise in farm real estate values during the 4 years ended March 1944 amounted to 36 percent. This was about the same percentage rise as occurred during the 4 years ended March 1919, the corresponding period of the first World War. However, the average level of values in this more recent period is only about four-fifths as high as in the first war.

during the last few years have been bought by farmers for actual operation by themselves.

The question of land values deserves more than ordinary attention now, both because of the sharp rise which has occurred so far in the war years and because of the serious possibility of a "boom" which might bring on another disaster, among overextended buyers, such as happened after the other war when prices collapsed. The present rise has not been uniform all over the country. In some sections there has been little boosting of prices, while in others something like a genuine boom already is under way. Average changes in value per acre are shown in figure 3 and regional differences in total value in table 4.

The greatest increases in land prices between 1940 and 1944 have been in the Corn Belt and the South Central States, where values are up 41 percent from 1940. Increases almost as large were reported from the Mountain and Pacific regions—43 and 40 percent respectively. In the North Atlantic States the rise has been 19 per-

cent; in Oklahoma-Texas, 26 percent (table 4).[2] In 4 States—South Carolina, Indiana, Colorado, and Wyoming—values are 50 percent or more above the 1940 level; in 11 States the increase has ranged from 40 to 49 percent.

TABLE 4.—*Farm real estate: Estimated total value of farm land and buildings, by selected regions, by years, 1915–20 and 1940–44*

Year	United States [1]	North Atlantic [2]	South Atlantic [3]	South Central [4]	Lake States [5]	Corn Belt [6]	Oklahoma-Texas	Great Plains [7]	Mountain [8]	Pacific [9]
	Million dollars	*Million dollars*	*Million dollars*	*Million dollars*	*Million dollars*	*Million dollars*	*Million dollars*	*Million dollars*	*Million dollars*	*Million dollars*
WORLD WAR I PERIOD										
1915	39, 597	3, 080	2, 604	2, 407	3, 947	13, 425	2, 956	6, 185	1, 801	3, 191
1916	42. 271	3, 142	2, 875	2, 650	4, 406	14, 407	3, 032	6, 576	1, 886	3, 297
1917	45, 531	3, 329	3, 145	2, 941	4, 823	15, 124	3, 382	7, 037	2, 109	3, 640
1918	49, 986	3, 448	3, 543	3, 431	5, 333	16, 383	3, 891	7, 778	2, 335	3, 845
1919	54, 539	3, 525	4, 225	3. 937	5, 676	17, 677	4, 136	8, 702	2, 651	4, 011
1920	66, 316	3, 920	5, 202	4, 891	6, 926	21, 978	5, 064	10, 504	3, 163	4, 669
WORLD WAR II PERIOD										
1940	33, 642	2, 780	3, 160	3, 135	3, 544	9, 031	3. 421	3, 555	1, 780	3, 237
1941	34, 026	2, 797	3, 241	3, 229	3, 546	9. 211	3, 429	3, 482	1, 821	3, 268
1942	36, 611	2, 892	3, 438	3, 534	3, 815	10, 193	3, 644	3, 666	1, 968	3, 461
1943	39, 963	3, 118	3, 756	3, 844	4, 141	11, 198	3, 855	4, 069	2, 184	3, 798
1944	45, 592	3, 306	4, 293	4, 430	4, 653	12, 739	4, 309	4, 798	2, 547	4, 518

[1] Because of rounding, figures may not add to totals.
[2] Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania.
[3] Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida.
[4] Tennessee, Kentucky, Alabama, Mississippi, Arkansas, and Louisiana.
[5] Michigan, Wisconsin, and Minnesota.
[6] Ohio, Indiana, Illinois, Missouri, and Iowa.
[7] North Dakota, South Dakota, Kansas, and Nebraska.
[8] Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, and Nevada.
[9] Washington, Oregon, and California.

Relative increases in value since 1940 in the Corn Belt, Mountain, and Pacific regions have been substantially larger than reported for those regions during 1915–19. The increases have been about the same as in the earlier war period in the North Atlantic and Great Plains regions, with smaller increases reported for all other regions. In the South Atlantic States land values increased 62 percent from 1915 to 1919, and only 36 percent for the 1940–44 period (table 4).

Non-Real-Estate Physical Inventories on Farms

Next to farm real estate in importance in the balance sheet of agriculture is the inventory of other physical assets. Such inventories on farms were estimated at 14.9 billion dollars as of January 1, 1940 and 24.0 billion dollars as of January 1, 1944, an increase of about 9.0

[2] The percentage changes in real estate values here reported differ slightly from those appearing in the full processed report which are based on weighted index numbers. The corresponding percentages in this summary are based on estimated total values.

billion dollars or about 60 percent.[3] The various types of assets included under this classification showed the following percentage increases in valuation during the 4-year period: Livestock, 86; crops, 139; machinery and equipment, 34; and household equipment, 10. Year-to-year changes in such inventories are shown in table 5.

TABLE 5.—*Inventory value of non-real-estate physical assets on farms, by classes, January 1, 1940–44, United States*

Class	1940	1941	1942	1943	1944
	1,000 dollars	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*
Livestock [1]	5,132,448	5,320,000	7,041,633	9,540,681	9,525,543
Crops [2]	2,338,819	2,492,780	3,408,726	4,576,475	5,594,644
Machinery	3,135,000	3,319,000	3,959,000	4,157,000	[3] 4,198,000
Household equipment	4,275,000	4,338,000	4,513,000	4,620,000	4,699,000
United States total	14,881,267	15,469,780	18,922,359	22,894,156	24,017,187

[1] Includes horses, mules, cattle, hogs, sheep, and poultry.
[2] Includes grains, hay and forage, oil crops, vegetables, tobacco, and miscellaneous crops.
[3] Preliminary.

Regional Variations in Non-Real-Estate Inventories

All areas of the country have shown increases of at least 50 percent in the value of their non-real-estate farm inventories during the period from January 1, 1940 to January 1, 1944 (table 6). The expansion in livestock numbers and the rapid rise in prices of both livestock and crops have accounted for the major part in the increase of such inventory of values.

[3] These value estimates are based upon the quantity of livestock, crops, and machinery on farms January 1, multiplied by the farm value per unit of such items. January 1 values per unit were used for livestock and machinery. Most of the crops were valued at December 15 farm prices although season average prices, for December 1 value per unit, were used in a few instances. In the following discussion the inventory-value fluctuations reflect changes in the quantity as well as the price, although in most cases it was found that price changes have a somewhat greater influence. The over-all effect of either price or quantity is difficult to show because of complications in finding a common base which can be used in totaling the various classes of physical inventories. However, in the discussion of the classes an effort is made to show both numbers and prices for individual items. The amount of crops held by farmers on farms under seal of the Commodity Credit Corporation's loan program are included. Commodities held under such loans but stored in warehouses, elevators, etc. off the farm are excluded.

TABLE 6.—*Inventory value of non-real-estate physical assets on farms, by classes and regions, January 1, 1940–44*

Class	1940	1941	1942	1943	1944	1940	1941	1942	1943	1944	1940	1941	1942	1943	1944
	North Atlantic					South Atlantic					South Central				
	1,000 dollars	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*
Livestock [1]	478,946	488,485	581,957	778,527	836,602	425,456	425,376	507,842	657,396	742,469	530,583	509,380	643,214	850,921	882,359
Crops [2]	232,389	220,903	273,185	315,788	383,501	172,915	188,220	207,921	285,479	378,742	220,941	257,779	309,254	431,064	554,294
Machinery	375,732	388,033	420,860	438,029	[3] 449,039	210,738	212,526	239,054	247,835	[3] 254,458	239,513	232,539	296,928	303,765	[3] 310,171
Total	1,087,067	1,097,421	1,276,002	1,532,344	1,669,142	809,109	826,122	954,817	1,190,710	1,375,669	991,037	999,698	1,249,396	1,585,750	1,746,824
	Corn Belt					Lake States					Great Plains				
Livestock [1]	1,223,230	1,252,053	1,745,791	2,479,725	2,405,288	687,853	715,731	952,022	1,261,729	1,287,429	545,026	592,980	835,064	1,247,733	1,196,771
Crops [2]	811,293	834,348	1,158,794	1,509,652	1,862,667	333,242	362,563	430,781	554,862	665,461	268,542	285,458	543,371	830,564	935,208
Machinery	760,680	819,561	984,430	1,052,074	[3] 1,063,085	500,813	557,512	659,072	708,218	[3] 708,998	358,313	378,284	475,850	487,847	[3] 488,088
Total	2,795,203	2,905,962	3,889,015	5,041,451	5,331,040	1,521,908	1,635,806	2,041,875	2,524,809	2,661,888	1,171,881	1,256,722	1,854,285	2,566,144	2,620,067
	Oklahoma-Texas					Mountain					Pacific				
Livestock [1]	476,171	494,230	666,182	883,356	795,687	484,414	521,071	696,752	875,045	860,554	280,769	320,694	412,809	506,249	518,384
Crops [2]	109,550	154,002	181,124	230,562	272,323	129,435	129,739	209,424	294,328	376,277	60,512	59,768	94,872	124,176	166,171
Machinery	265,536	279,139	331,894	351,385	[3] 349,493	184,925	198,447	235,481	241,944	[3] 245,671	238,750	252,959	315,431	325,903	[3] 328,997
Total	851,257	927,371	1,179,200	1,465,303	1,417,503	798,774	849,257	1,141,657	1,411,317	1,482,502	580,031	633,421	823,112	956,328	1,013,552

[1] Includes estimates of the value of horses, mules, cattle, milk cows, hogs, sheep, and poultry.
[2] Includes estimates of the value of grains, hay and forage, hayseed, oil crops, vegetables, broomcorn, tobacco, and cotton.
[3] Preliminary.

The largest regional increase in terms of dollars was in the Corn Belt, which accounted for $2,536,000,000, or 28 percent of total increased value of all inventories of this type on farms in the United States between 1940 and 1944. In this region the total of these inventories increased 91 percent during the 4-year period, while values of livestock increased 97 percent; crops, 130 percent; and machinery inventories increased 40 percent.[4] The largest relative increase was shown in the Great Plains area where the increase between January 1, 1940 and 1944 amounted to $1,448,000,000 or 124 percent. In this region livestock inventories increased 120 percent and crops nearly 250 percent, whereas machinery inventory increased only 36 percent.

The smallest relative increase in total non-real-estate physical inventories between January 1, 1940 and January 1, 1944 occurred in the North Atlantic States. This increase was only 54 percent. The livestock inventory in this region increased about 75 percent, while crops increased about 65 and machinery about 20 percent.

Intangible Assets Have Increased Also

The largest item in the category of intangible assets as of the beginning of 1944 is 9.7 billion dollars of bank deposits and currency owned by farm operators. This figure has nearly doubled since Pearl Harbor. Farmers' demand deposits, as checking accounts are called, have increased at a more rapid rate during the war years than have checking accounts of other depositors (not including those of the Federal Government).

Despite rising income-tax payments, United States savings bond purchases, and debt reduction, demand deposits of farmers continue to increase month by month. A high level of cash farm income has not been fully offset by so high a level of cash outlays for consumer goods, equipment, and operating expenses. Many goods have not been available in nearly the quantities that farmers could have used and have paid for (fig. 4 and table 7).

The strong cash position, typical of agriculture as a whole, augurs well for its capacity to meet future contingencies. It is entirely probable, however, that hundreds of thousands of lower income farmers, though benefiting from higher wartime income, have accumulated comparatively small amounts of deposits and currency.

[4] Figures on the regional distribution of household equipment are not now available and it has been assumed in estimating total changes in inventory values that the value of such equipment was distributed by regions in the same proportion as other non-real-estate physical assets

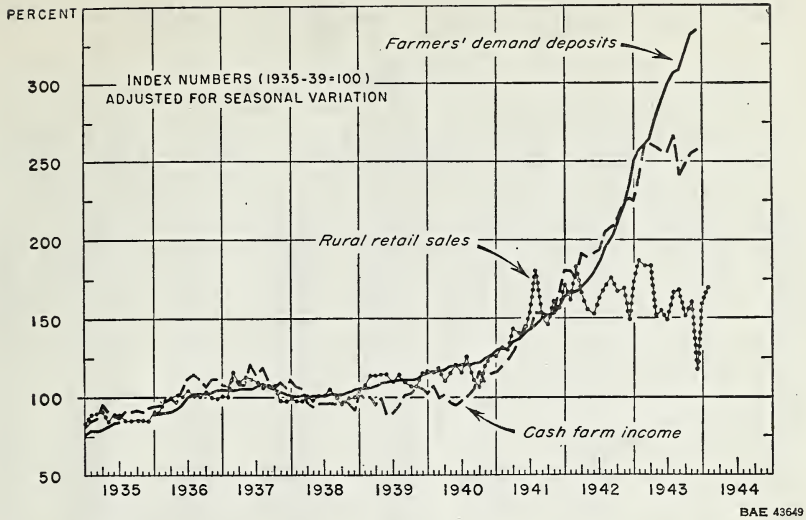


FIGURE 4.—Farmer-owned demand deposits, cash farm income, and rural retail sales, United States, 1935–44

Demand deposits of farmers continue to increase month by month during the war. A high level of cash farm income has not been fully offset by so high a level of cash outlays for consumer goods, farm equipment, and farm operating expenses nor by income-tax payments, purchases of savings bonds and debt reduction.

United States savings bonds constitute the second largest intangible item on the agricultural balance sheet. In the 4 years preceding January 1, 1944, farmers purchased series D and E bonds at an estimated cost of 2,031 million dollars (table 8). During the same period they paid an estimated 170 million dollars for series F and G bonds. Allowance for bonds bought before 1940, for cashing, and for changes in redemption value makes it appear that farmers' holdings of these bonds on January 1, 1944, amounted to about 2.4 billion dollars. About 90 percent of these bonds are believed to be of series E, and a large part of the remainder are of series F and G. Most of the bonds now held were acquired after Pearl Harbor. It is quite generally believed that farmers have cashed very few of the bonds purchased, and such evidence as has been gathered indicates that their record in this respect is considerably better than average. Some cashing of bonds has been observed in connection with land purchases.

Warehouse receipts worth more than a half billion dollars are estimated as held by farmers on January 1, 1944.

Farmers' financial interest in cooperatives was around 660 million dollars shortly before this war began. Other intangibles held by farmers for which no estimate has been made are probably relatively small.

TABLE 7.—*Index numbers of farmer-owned deposits by specified regions, annually 1924–42, monthly January 1943–January 1944* [1]

[1924–29=100]

Year and month	20 leading agricultural States [2]	5 Corn Belt States [3]	8 cotton-growing States [4]	8 Range States [5]	3 Lake States [6]	4 Great Plains States [7]	Oklahoma-Texas
1924	94.6	97.5	95.1	94.9	96.6	95.7	93.7
1925	100.4	100.4	102.9	94.6	100.1	103.8	101.4
1926	100.6	101.4	103.6	96.8	101.2	101.2	95.8
1927	99.5	99.7	100.8	98.6	98.3	96.6	98.9
1928	103.3	101.6	101.1	107.5	101.7	102.2	106.3
1929	101.5	99.5	96.5	107.7	101.9	100.9	103.9
1930	93.9	91.5	83.3	98.4	97.5	97.6	89.6
1931	81.4	78.9	65.9	85.3	88.9	87.2	74.0
1932	64.0	60.6	48.9	64.6	71.9	68.1	59.7
1933	52.6	45.1	45.6	53.8	49.7	59.4	57.1
1934	64.2	58.2	59.0	61.4	56.9	73.1	69.9
1935	(8)	(8)	(8)	(8)	(8)	(8)	(8)
1936	83.2	79.6	81.4	87.6	77.3	88.4	89.9
1937	90.1	89.3	88.1	94.4	86.3	88.5	99.8
1938	89.6	91.6	86.8	92.4	87.1	81.8	102.1
1939	94.3	99.0	91.6	98.0	90.4	85.0	107.4
1940	101.8	109.4	95.9	105.5	96.8	90.2	115.6
1941	116.0	128.9	109.9	116.8	105.4	99.4	132.3
1942	141.7	159.8	138.8	140.8	119.8	126.6	161.4
1943:	200.9	223.4	195.0	211.2	159.4	195.0	244.0
Jan	177.8	196.7	179.5	187.6	141.8	168.2	213.2
Feb	182.6	201.0	183.5	186.5	145.5	173.5	225.1
Mar	183.8	204.0	182.8	189.7	147.9	177.1	220.9
Apr	183.9	205.6	181.6	192.8	149.3	176.6	218.3
May	190.4	212.9	186.6	198.6	151.8	183.4	226.5
June	194.9	218.2	188.3	200.7	155.4	188.0	234.0
July	201.4	223.9	190.9	203.2	160.8	193.8	242.1
Aug	205.6	228.9	193.9	211.0	164.4	203.6	247.8
Sept	211.0	233.6	202.3	221.2	167.5	208.8	258.8
Oct	220.7	244.8	210.6	236.8	172.6	217.1	270.2
Nov	228.6	254.2	218.3	250.9	178.0	224.1	284.3
Dec	230.1	256.9	221.3	255.4	177.2	225.4	286.5
1944:							
Jan	232.3	260.6	224.6	252.8	178.8	227.8	284.9

[1] Based upon data reported by member banks of the Federal Reserve System located in places of less than 15,000 population (1940 Census). Each deposit series is weighted, the deposits for each State having been given a weight equal to the proportion, in the base period, of that State's cash farm income to the total cash farm income of the group of States.

[2] Arkansas, Georgia, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Dakota, Texas, and Wisconsin.

[3] Ohio, Indiana, Illinois, Missouri, and Iowa.

[4] North Carolina, South Carolina, Georgia, Alabama, Mississippi, Arkansas, Louisiana, and Oklahoma.

[5] Montana, Colorado, Arizona, Idaho, Nevada, New Mexico, Utah, and Wyoming.

[6] Michigan, Wisconsin, and Minnesota.

[7] North Dakota, South Dakota, Nebraska, and Kansas.

[8] Five months of 1935 are unavailable.

Such, in summary, are the principal elements on the asset side of the farm balance sheet, both tangible and intangible. The effect of the war, so far, has been to enlarge the tangible assets, in some measure by an increase of actual physical property, but in much greater measure by raising the values of property already owned. It has greatly added to the intangible assets, as farm income has been permitted to accumulate in cash balances or has been invested in securities, chiefly Government bonds.

TABLE 8.—*United States savings bonds: Estimated cost of series D and E purchased by farmers, by regions, 1940–43*

Region	Amount purchased 1940–43			1940	1941	1942	1943
	Total	Per capita	Percentage of total				
	1,000 dollars	*Dollars*	*Percent*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*
North Atlantic [1]	220, 553	96. 51	10. 86	10, 103	18, 593	73, 419	118, 438
South Atlantic [2]	240, 759	39. 82	11. 85	9, 705	18, 014	78, 072	134, 968
South Central [3]	276, 684	38. 27	13. 62	12. 492	19, 560	82, 978	161, 654
Lake States [4]	237, 538	90. 05	11. 70	14, 970	18, 242	67, 757	136, 569
Corn Belt [5]	457, 964	93. 72	22. 55	28, 726	33, 760	137, 994	257, 484
Oklahoma-Texas	172, 940	56. 22	8. 51	8, 146	13, 665	49, 190	101, 939
Great Plains [6]	174, 126	100. 36	8. 57	10, 140	11, 271	43, 187	109, 528
Mountain [7]	83, 778	76. 08	4. 12	3, 706	5, 985	22, 455	51, 632
Pacific [8]	166, 931	136. 03	8. 22	6, 472	12, 374	52, 132	95, 953
United States	2, 031, 273	67. 21	100. 00	104, 460	151, 464	607, 184	1, 168, 165

[1] Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania.
[2] Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida.
[3] Kentucky, Tennessee, Alabama, Mississippi, Arkansas, and Louisiana.
[4] Michigan, Wisconsin, and Minnesota.
[5] Ohio, Indiana, Illinois, Missouri, and Iowa.
[6] North Dakota, South Dakota, Kansas, and Nebraska.
[7] Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, and Nevada.
[8] Washington, Oregon, and California.

Calculated from data provided by the Department of the Treasury.

Liabilities Have Decreased Somewhat

Turning now to the liabilities, the largest item of debt is that secured by farm mortgages (table 9).

Mortgage debt.—During the first World War—4 years ended January 1, 1919—the total mortgage debt *increased* more than 2,100 million dollars. But this time, in the 4 years ended January 1, 1944, the debt *decreased* more than 950 million dollars. Back at the beginning of 1919 the total outstanding farm-mortgage debt amounted to 7,137 million dollars, whereas at the beginning of 1944 it was only 5,635 million dollars.

Not only is the debt smaller this time but it rests upon more farms than it did before. Somewhat under 44 percent of all owner-operated farms are mortgaged now, while probably something under 41 percent were then. In other words, since the average mortgage per farm is smaller at present and interest rates are much lower, the burden of debt may be regarded as definitely easier to carry now than it was during the other war period. With respect to this important liability, the farm business of the country—as matters stand so far—is in decidedly better condition this time to withstand post-war shocks.

The total of farm mortgages, representing what may be called the great funded debt of agriculture, is one of the most significant indicators in the farm financial picture. It is so important, in appraising the position of the farm business at any given time, and its trend has been so different in this war from that in the first World War, that some further facts regarding the mortgage situation are worthy of note.

Mortgage Debt Varies in Significance for Different Farms

Unlike much of the other data shown in the balance sheet (p. 6), the item "Real estate mortgages" applies to only a part of the farms. In 1940, only 39 percent of the farms were mortgaged, although these farms on the average were larger and more valuable than those that were free from mortgage. Mortgaged farms accounted for 43 percent of the acreage in farms and 47 percent of the value of farm real estate. Average value per acre of mortgaged farms in 1940 was $34.71 as compared with $29.44 for free-of-debt farms.

Wide variations are found by areas in the proportion of farms under mortgage and in the amount of mortgage debt in relation to the value of the real estate on which it rests. In 1940 the proportion of farms under mortgage ranged by States from less than one-fifth to more than one-half; and the ratio of mortgage debt to the value of mortgaged farms ranged by States from less than one-third to almost three-fifths.

The significance of mortgage debt varies widely also according to the tenure arrangements under which the land is operated, as is indicated by the ratios presented in table 10. Mortgage debt is of most significance in connection with farms owned by part owners (those who own a part and rent the remainder of the land they operate). The value of mortgaged part-owner farms accounted for almost two-thirds of the value of all part-owner farms in 1940. On the other hand, mortgage debt plays a much smaller part in the case of farms operated by tenants and managers.

TABLE 10.—*Selected farm-mortgage ratios by tenure under which the land is operated, January 1, 1940* [1]

	All farms	Full-owner	Part-owner	Rented and manager-operated
Percentage of farms mortgaged	38.8	41.4	54.7	31.2
Percentage of all farm land in mortgaged farms	43.1	47.2	64.9	34.3
Value of mortgaged farms, as a percentage of the value of all farms	47.2	51.6	66.2	38.1
Mortgage debt, as a percentage of the value of mortgaged farms	41.5	42.5	46.9	37.8
Mortgage debt, as a percentage of the value of all farms	19.6	21.9	31.0	14.4

[1] Data are from Cooperative Survey—Farm-Mortgage Indebtedness in the United States—Release No. 1—Number of Mortgaged Farms, June 1943—and from Release No. 2—Amount of Farm-Mortgage Debt, March 1944—issued jointly by the Bureau of Agricultural Economics and the Bureau of the Census.

Because mortgage debt is of widely varying importance for different farms, its significance as an absorbent of increased wartime income doubtless has varied widely. High mortgage debts provided a good outlet for this increased wartime income of some of the farmers. But farmers with no debts, or with very small debts, would be expected to use their income more freely to buy United States savings

bonds or additional land and to accumulate additional liquid resources in the form of cash and bank deposits.

It seems probable that by 1944 a distribution of mortgaged farms by debt-to-value classification would still show a large proportion of the mortgaged farms in the relatively high debt-to-value classification and would also show a large proportion in the low debt-to-value classification. Some have paid down their mortgages to a very low figure, whereas others have recently bought farms at high prices and

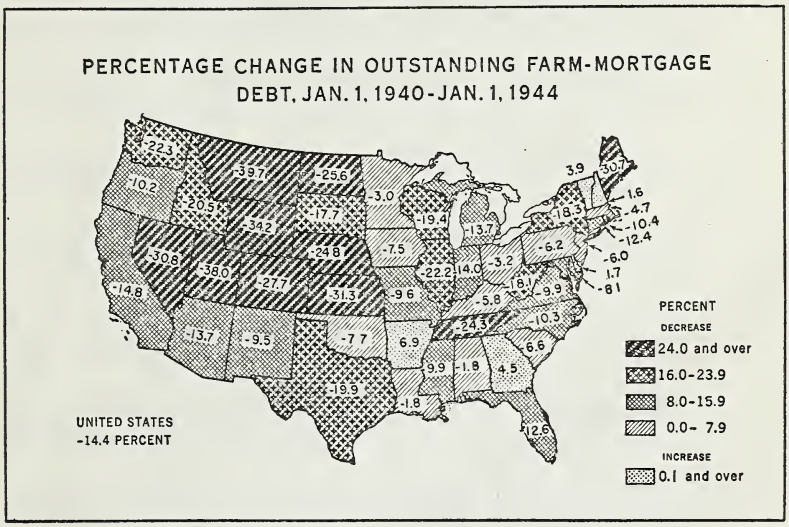


FIGURE 5.—Changes in outstanding farm-mortgage debt during the 4 years ended January 1, 1944 have ranged by States from an increase of almost 7 percent to a decrease of almost 40 percent. Decreases in most of the Western States have been greater than the average for the country as a whole. In only 6 States east of the Mississippi River did debt decline more rapidly than the national average.

put large mortgages on them. A change for the worse in the farm-income situation, therefore, would be likely to have widely varying effects on different farmers according to their own current debt situation.

The significance of the reduction of almost a billion dollars in mortgage debt from 1940 to 1944, therefore, must be evaluated in the light of the probability that even yet many individual farms are heavily encumbered. That changes in mortgage debt from 1940 to 1944 have been far from uniform is indicated by the variations, by States, from an increase of almost 7 percent to a reduction of almost 40 percent (fig. 5).

TABLE 9.—*Estimated amount of farm-mortgage debt outstanding, by States, January 1, 1930–44*

State and region	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944
	1,000 dollars	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*	*1,000 dollars*
Maine	27,613	28,251	28,704	32,756	29,894	30,626	30,457	29,096	27,629	26,477	24,757	25,055	23,028	20,081	17,159
New Hampshire	11,756	11,879	12,030	12,053	11,904	12,423	12,517	12,109	11,826	11,585	11,220	11,151	11,439	11,505	11,394
Vermont	35,365	34,658	33,659	32,771	31,966	31,391	30,257	29,969	29,367	28,657	27,814	27,773	27,489	27,234	28,911
Massachusetts	48,984	49,518	53,009	51,225	49,544	49,613	47,972	47,639	47,356	47,080	45,845	45,791	44,921	43,475	43,677
Rhode Island	4,632	4,616	4,714	4,620	4,031	4,065	4,187	4,276	4,330	4,259	4,121	4,151	4,061	3,800	3,693
Connecticut	43,358	47,248	52,384	52,374	49,630	47,886	44,996	43,006	40,847	38,919	36,742	35,936	35,357	32,998	32,191
New York	233,791	228,312	231,352	229,972	216,473	213,634	211,194	207,566	202,829	197,462	191,786	185,864	178,595	168,271	156,651
New Jersey	54,180	53,255	53,170	52,059	48,360	49,206	48,770	48,735	48,898	48,891	48,791	49,597	50,153	48,540	45,863
Pennsylvania	168,492	182,466	184,498	177,286	159,991	150,738	146,200	142,213	138,070	135,189	131,578	129,729	129,234	125,701	123,443
North Atlantic	628,171	640,203	653,520	645,116	601,793	589,582	576,550	564,609	551,152	538,519	522,654	515,047	504,277	481,605	462,982
Ohio	272,738	263,388	255,786	241,308	220,731	224,261	225,341	224,320	227,491	232,550	239,059	245,448	252,681	242,686	231,446
Indiana	269,913	260,001	255,215	235,491	218,721	224,169	225,525	224,244	226,920	231,586	236,266	243,002	244,487	229,129	203,169
Illinois	614,059	571,632	556,410	532,762	494,361	481,797	476,298	454,266	437,780	430,173	418,970	415,192	406,988	373,981	325,915
Iowa	1,196,197	1,142,778	1,079,337	982,484	862,440	787,159	762,614	744,238	732,257	725,154	705,589	707,739	723,397	710,985	652,906
Missouri	442,820	422,849	391,936	352,970	311,859	286,460	268,507	254,318	245,904	237,588	229,377	231,832	232,971	219,962	207,327
Corn Belt	2,795,727	2,660,648	2,538,684	2,345,015	2,108,112	2,003,846	1,958,285	1,901,386	1,870,352	1,857,051	1,829,261	1,843,213	1,860,524	1,776,743	1,620,763
Michigan	221,432	212,635	201,914	189,071	176,441	183,172	184,063	182,150	178,772	176,920	174,308	173,792	171,451	161,231	150,463
Wisconsin	505,472	508,369	483,371	451,900	403,714	413,082	409,129	398,640	383,821	368,975	356,936	346,716	333,279	313,933	287,513
Minnesota	476,210	457,238	437,556	399,602	367,056	396,946	409,676	379,836	376,112	375,943	375,990	384,419	395,901	385,623	364,768
Lake States	1,203,114	1,178,242	1,122,841	1,040,573	947,211	993,200	1,002,868	960,626	938,705	921,838	907,234	904,927	900,631	860,787	802,744
North Dakota	239,772	223,725	207,602	185,448	170,422	197,177	199,771	182,338	172,180	154,312	141,230	132,717	128,255	122,631	105,047
South Dakota	293,080	279,225	267,336	246,432	218,745	216,592	199,709	179,896	162,983	145,808	127,706	119,122	118,474	114,740	105,042
Nebraska	510,453	519,077	516,323	487,587	437,824	431,686	407,888	382,495	358,962	334,355	309,826	290,081	281,184	261,753	232,921
Kansas	411,747	422,667	429,156	409,963	371,181	357,123	343,483	325,921	310,140	299,599	284,248	273,454	258,549	227,800	195,139
Great Plains	1,455,052	1,444,694	1,420,417	1,329,430	1,198,172	1,202,578	1,150,851	1,070,650	1,004,265	934,074	863,010	815,374	786,462	726,924	638,149
Delaware	9,581	9,383	8,245	8,095	8,631	8,668	8,576	8,443	8,286	8,132	7,957	8,127	8,496	8,347	8,095
Maryland [1]	50,377	49,408	51,194	49,502	48,089	43,790	45,068	45,417	45,383	45,873	46,675	46,011	44,396	43,384	42,894
Virginia	91,000	87,699	83,795	77,974	73,829	75,093	74,736	72,976	73,027	72,957	72,299	72,245	70,840	68,406	65,124
West Virginia	26,177	26,057	24,292	22,616	22,844	23,671	23,574	22,974	22,754	22,464	21,969	22,031	21,671	20,193	17,986
North Carolina	111,880	108,940	105,210	95,249	88,497	93,905	92,942	91,799	90,336	89,685	90,071	96,652	97,411	88,645	80,829
South Carolina	64,433	57,872	50,988	43,402	41,345	47,149	47,685	46,792	46,737	46,773	45,948	46,713	50,687	45,950	42,932
Georgia	113,060	104,907	95,789	83,833	75,398	82,867	82,275	82,137	82,156	82,397	82,037	84,355	90,901	89,916	85,740
Florida	52,840	47,783	41,988	36,437	36,179	40,578	41,209	39,654	38,485	38,064	38,101	38,380	35,559	33,726	33,304

South Atlantic	519, 348	492, 049	461, 501	417, 108	394, 812	415, 721	416, 065	410, 192	407, 164	406, 345	405, 057	414, 514	419, 961	398, 567	376, 904
Kentucky	116, 250	112, 547	107, 143	101, 219	97, 034	105, 226	105, 560	105, 982	105, 746	107, 963	109, 253	110, 504	112, 414	108, 687	102, 915
Tennessee	115, 280	110, 626	105, 278	97, 237	91, 257	93, 055	93, 327	93, 121	92, 102	92, 501	92, 614	90, 017	85, 033	77, 036	70, 069
Alabama	97, 890	98, 630	96, 117	90, 335	83, 854	81, 421	79, 670	79, 547	80, 180	80, 978	81, 859	86, 834	90, 278	88, 053	80, 354
Mississippi	103, 312	100, 850	101, 149	88, 506	81, 998	85, 073	89, 627	89, 489	95, 506	96, 122	100, 368	103, 491	104, 776	99, 968	90, 389
Arkansas	99, 085	100, 632	95, 617	84, 280	70, 179	69, 317	70, 672	69, 996	70, 770	71, 478	72, 513	75, 560	79, 305	78, 405	77, 519
Louisiana	63, 838	62, 022	60, 945	57, 560	54, 904	57, 951	56, 880	55, 817	55, 328	55, 629	55, 098	57, 221	58, 872	57, 029	54, 132
South Central	595, 655	585, 307	566, 249	519, 137	479, 226	492, 043	495, 736	493, 952	499, 632	504, 671	511, 705	523, 627	530, 678	509, 178	475, 378
Oklahoma	274, 971	261, 300	259, 210	233, 230	193, 047	183, 421	175, 861	168, 816	161, 317	157, 508	153, 679	156, 364	159, 332	151, 554	141, 850
Texas	671, 434	648, 588	630, 965	596, 134	566, 142	565, 968	537, 818	513, 933	486, 055	458, 008	431, 746	421, 448	417, 817	386, 271	345, 642
Oklahoma-Texas	946, 405	909, 888	890, 175	829, 364	759, 189	749, 389	713, 679	682, 749	647, 372	615, 516	585, 425	577, 812	577, 149	537, 825	487, 492
Montana	129, 744	134, 730	132, 734	122, 438	104, 080	100, 331	96, 153	87, 434	79, 184	72, 670	66, 118	63, 536	57, 535	48, 143	39, 876
Idaho	115, 547	115, 577	110, 645	100, 536	87, 626	89, 404	88, 491	84, 755	82, 371	81, 335	78, 763	78, 361	77, 557	70, 790	62, 619
Wyoming	43, 337	44, 068	41, 200	40, 072	35, 772	36, 709	36, 622	36, 381	35, 726	34, 816	34, 009	32, 948	29, 030	25, 624	22, 374
Colorado	138, 248	136, 763	130, 731	123, 388	108, 768	103, 479	99, 455	92, 565	86, 393	80, 101	75, 005	73, 408	70, 727	61, 386	54, 238
New Mexico	38, 954	40, 054	39, 348	33, 955	28, 935	27, 492	28, 625	28, 333	28, 220	27, 955	27, 499	26, 764	24, 564	24, 195	24, 880
Arizona	41, 690	42, 766	39, 728	33, 505	31, 005	30, 797	30, 027	29, 869	29, 447	29, 446	28, 933	28, 498	28, 348	26, 362	24, 981
Utah	51, 875	50, 471	48, 616	46, 268	44, 648	43, 757	44, 864	43, 015	41, 214	38, 963	36, 650	34, 946	32, 539	27, 977	22, 713
Nevada	15, 617	15, 373	18, 187	17, 268	15, 074	15, 131	13, 890	12, 548	12, 933	11, 137	10, 213	9, 639	9, 461	8, 204	7, 071
Mountain	575, 012	579, 802	561, 189	517, 430	455, 908	447, 100	438, 127	414, 900	395, 488	376, 423	357, 190	348, 100	329, 761	292, 681	258, 752
Washington	161, 557	158, 068	156, 545	145, 669	130, 509	125, 405	121, 793	115, 453	111, 561	109, 829	106, 857	104, 927	101, 227	92, 064	83, 028
Oregon	135, 917	133, 865	128, 012	118, 016	105, 873	104, 860	103, 440	99, 710	96, 391	92, 114	90, 421	90, 281	88, 900	84, 235	81, 153
California	614, 810	615, 322	594, 850	559, 560	504, 398	460, 735	445, 307	439, 736	432, 802	422, 938	407, 585	396, 665	384, 277	356, 559	347, 343
Pacific	912, 284	907, 255	879, 407	823, 245	740, 780	691, 000	670, 540	654, 899	640, 754	624, 881	604, 863	591, 873	574, 404	532, 858	511, 524
United States	9, 630, 768	9, 398, 088	9, 093, 983	8, 466, 418	7, 685, 203	7, 584, 459	7, 422, 701	7, 153, 963	6, 954, 884	6, 779, 318	6, 586, 399	6, 534, 487	6, 483, 847	6, 117, 168	[2] 5, 634, 772

[1] Includes data for District of Columbia.
[2] Includes joint stock land bank loans called for foreclosure of $84,384 not distributable by States.

Low Interest Rates Reduce Burden of Debt

The significance of the item "Real estate mortgages" in the balance sheet (p. 6) is influenced also by the current low level of interest rates. The average for the country as a whole is estimated for January 1, 1944 at 4.5 percent. This is to be compared with 4.6 percent in 1940, 6.0 percent in 1930, 6.4 percent in 1923, when the debt was at a peak, and 6.1 percent in 1919. Thus interest charges per $1,000 of farm real estate debt in 1943 were at least 25 percent below the charges on the same amount of debt in 1919.

For the country as a whole, interest charges on mortgage debt in 1943 were equal to only about 3 percent of the estimated cash farm income from mortgaged farms. A rough estimate for 1919 would place the figure at around 7 percent. There are other fixed charges to be met, of course, but interest charges in the aggregate are now relatively low.

Care must be exercised in the interpretation of *average* interest rates for much the same reason as was pointed out in connection with the decrease of *total* mortgage debt. In many areas the "average" interest rates conceal the presence of a large group of mortgages with low interest rates, which are offset by another large group of mortgages with high interest rates. This is particularly true in some of the southern and western States. For farms encumbered with high mortgage debt in relation to value and with relatively high interest rates, interest charges may be fairly high in relation to cash farm income. Such situations occur frequently in a period when farm transfers with small owner equities are numerous and local funds are used to finance the transfer.

Significance of Mortgage Debt Depends Also on Lending Facilities

How burdensome a mortgage may be in the short run depends in part on whether the mortgagee is able to "ride through" for a time with the mortgagor. Despite the increased importance of local lenders as sources of mortgage credit in recent years, the mortgage debt is still held much more largely by federally sponsored and large centralized lending institutions than was the case after World War I. This situation simplifies the administrative problems involved in giving farmers temporary aid in times of economic strain. Moreover, the existence of refinancing facilities, together with the experience gained and the precedents established in the 1930's in dealing with debt distress, all would facilitate speedy measures to deal with farmers' problems of debt if the need should arise.

Such factors, which cannot be reflected in comparative balance sheets for the two war periods, may have considerable effect in times

of low farm income. They are of special importance in the interpretation of the items of the balance sheet that relate to debt, because the farmers' debt problems have long been recognized as appropriate fields for Federal action.

Non-Real-Estate Debt

Farmers have a variety of other debts standing against them—open accounts, installment accounts, loans evidenced by unsecured

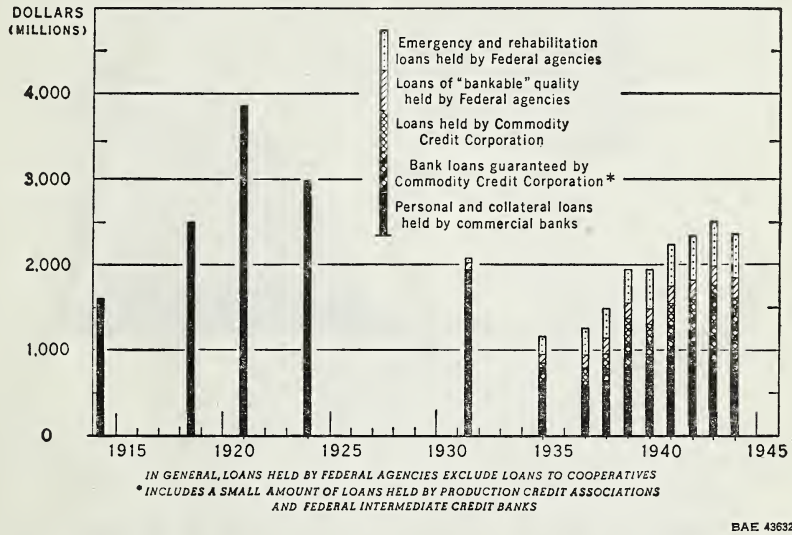


FIGURE 6.—NON-REAL-ESTATE LOANS TO FARMERS HELD BY COMMERCIAL BANKS AND SELECTED FEDERAL AGENCIES, UNITED STATES, ON VARIOUS DATES, 1914–44

During and immediately following World War I non-real-estate debt expanded rapidly. On January 1, 1921, the debt to institutions was nearly 4 billion dollars. By July 1, 1931, it had shrunk to a little over 2 billion dollars. During the liquidation of the early 1930's it was again nearly halved. As conditions improved, it increased. So far during World War II the rise of this debt has not been so great as during World War I. Until the 1930's almost all the institutional non-real-estate debt was held by commercial banks. Since then loans made by Government-sponsored agencies have increased substantially.

notes, and loans secured by chattel mortgages. Data are lacking to make precise estimates on this class of debts but it appears probable that the total is about 3.5 billion dollars, or nearly two-thirds as much as the outstanding real estate debt. The total of loans extended to farmers by banks and other institutions, outstanding on January 1, 1944, is estimated to have been 2.4 billion dollars (fig. 6). One sizable portion of this debt was the 700 million dollars owed by farmers on nonrecourse notes in connection with activities of the Commodity

Credit Corporation. The non-real-estate debt outstanding to other Government agencies totaled 750 million dollars (fig. 7). In addition to loans held which were guaranteed by the Commodity Credit Corporation, commercial banks held loans amounting to 907 million dollars (a decline from about 1,100 million dollars on January 1, 1942).

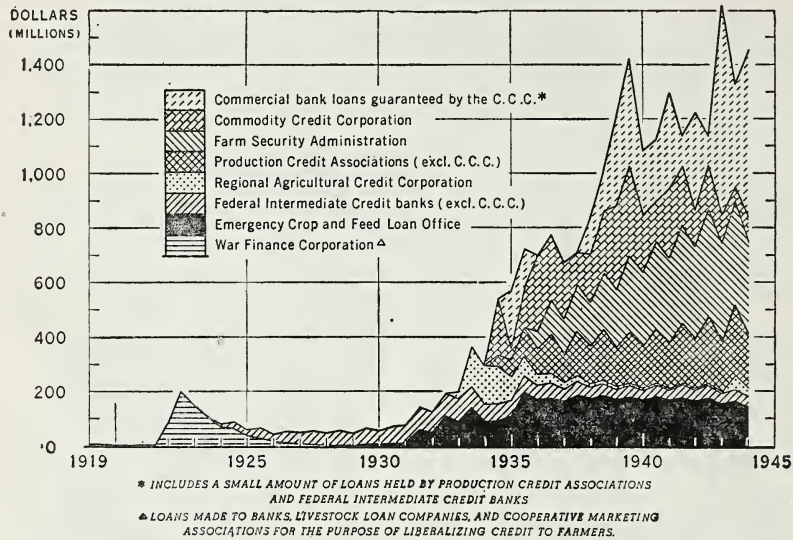


FIGURE 7.—NON-REAL-ESTATE LOANS TO FARMERS BY FEDERALLY SPONSORED AGENCIES: AMOUNTS OUTSTANDING, UNITED STATES, 1919–44

Credit for agriculture has been a traditional concern of the Federal Government but the formation and sponsorship of non-real-estate credit agencies designed especially to serve agriculture has become of particular importance only since World War I. Credit was extended by the temporary War Finance Corporation during the agricultural depression of 1921–22. The permanent Federal intermediate credit bank system was established as a discount mechanism in 1923. In the depression of the early thirties, emergency crop and feed loans, made sporadically since 1918, rapidly expanded. New agencies set up at that time were the Farm Security Administration, the Commodity Credit Corporation, and those under sponsorship of the Farm Credit Administration. On January 1, 1944, such agencies held or were guarantors for over 1.4 billion dollars of non-real-estate loans to farmers.

In World War I, when there were no federally sponsored short-term credit agencies, commercial banks were virtually the sole institutional source of non-real-estate credit for farmers. In July 1918, farmer indebtedness to commercial banks was 2½ billion dollars. During that war, farmers' non-real-estate debts expanded rapidly. From the spring of 1914 to July 1918, short-term debts to commercial banks increased 56 percent. After the end of the war non-real-estate debt rose even more rapidly. On January 1, 1921, the amount

outstanding was nearly 2½ times as great as at the beginning of the war.

So far during this war ample credit has been available to most farmers for their production needs. Notwithstanding the large funds available in country banks and from the Government, and the fact that production costs have risen materially, total non-real-estate debt outstanding to principal institutions, excluding CCC loans, increased only 10 percent during the 4 years ended January 1, 1944. The fact is, incomes and savings have so improved that much of the operating expense of agriculture can be financed without borrowing money. Whether this favorable situation may continue will depend largely upon the trend of income in relation to costs of production.

The existing moderate level of non-real-estate indebtedness is accompanied by a reduction in the number of borrowers for production purposes. It should be pointed out, however, that because of expanded operations and higher production costs many who do borrow have much larger loans than before this war. From 1940 to 1943 the average size of loans made by the Production Credit System, Farm Security Administration, and the Emergency Crop and Feed Loan Office increased 44, 32, and 29 percent respectively. Farmers in most instances have little difficulty in paying off loans with current incomes. But there is an element of danger for individuals who have greatly expanded short-term loans. A crop failure or a sudden drop in prices before these loans are repaid could leave these farmers with an excessive debt that might cause serious trouble.

Economic Forces—World War II vs. World War I

Many observers expected economic developments in this war to be much as they were in World War I. In many respects the economic forces have been the same and have brought similar trends. In some instances, however, there have been substantial differences. Farm real estate values in this war have not yet reached the high levels of the corresponding periods of the other war, notwithstanding the same rate of increase. Debts of agriculture as a whole are declining this time whereas during the period of the first war they rose sharply. Within the last 4 years, farmers' reserves of cash, or its equivalent, have reached the highest figure in our history. Likewise, inventory values of crops and livestock have expanded rapidly and are now generally larger than those on hand 25 years ago. In the present period we have had especially favorable growing conditions and a longer upswing in the livestock cycle. These factors have helped to swell the inventories of possessions other than real estate.

Coincident with record incomes during this war, farmers have been restricted in their expenditures by a national economic policy that has used more drastic curbs than was the case in the other war.

These dual circumstances have resulted in an accumulation of cash which has been retained by the farmers as reserves in the form of currency, bank deposits, and Government bonds. And, of course, this high net income has made possible a reduction in farm debts.

Land prices started to rise from a lower level this time and much of the rise so far has been in the nature of a recovery. Also the disposal of the large real estate holdings of credit institutions which they had acquired during the depression, has had a stabilizing influence on prices.

A changed attitude on the part of farmers, creditors, and the Government has played its part in shaping things differently in this war. Before World War I agriculture had enjoyed about two decades of slowly rising prices and moderate prosperity. Many thought that the high prices of both land and farm products which developed during that war would continue. That optimism stimulated overexpansion and considerable speculation, which gave rise to heavy debt. But what happened after the collapse of prices in 1921 brought about a great change in the attitude of most prospective buyers toward the future of land and commodity prices. The whole experience had a sobering effect and has proved to be a real restraint on overexpansion in this present period.

In general, the farm business, despite its wartime stimulation, apparently reflects reasonably conservative management so far in this war period. Agriculture reflects much the same expansive influence as it did during the other war but no evidence of such a large use of borrowed money appears this time—at least so far. On the contrary, farmers are using their increased incomes to pay their debts, and put their business in a generally stronger condition. But all of the circumstances now ruling the situation serve to remind us that the impact of modern war upon all basic industries is very far reaching; that the forces of financial inflation have by no means yet run their course; that post-war readjustments historically are on the down side; and that the great disaster which overtook many farmers as well as other businessmen after the last war was a result of their overextended debt situation, when prices and incomes fell.

The Post-War View

It is impossible to foretell with certainty what the general economic conditions will be in the immediate post-war period. Yet they will have a profound effect on what farmers do and on what changes occur in the consolidated balance sheet of agriculture.

If the immediate post-war period should be one of considerable confusion, unemployment, and depression, there is little doubt that farm income would suffer a reduction despite such price-support legislation as is now provided for that period. Should this occur,

the balance sheet of agriculture would undergo extensive change. It would be reasonable to expect shrinkage of greater or lesser degree in all farm assets and probably some increase in debt. The nature and degree of changes in assets and debts would depend on the severity of the decline in the demand for farm goods and in their prices. They would also depend on the duration, or prospects of duration, of the lower farm income which would result from the reduced demand and lower prices.

If, on the other hand, the immediate post-war period is one of high industrial activity and sustained farm income, farmers may be inclined to overlook impending readjustments that will be necessary as wartime demand and price supports, which were extended into the immediate post-war period, expire. This attitude may lead to further expansion of agricultural facilities after the fighting ceases, resulting in rising physical inventories, rising debt, and falling cash assets. In a situation of this kind a land boom and a feverish reaching for manufactured goods at excessive prices could easily develop.

Forces which tend to generate a land boom are now numerous and strong. Farm income is high; interest rates are low; general requirements as to payments are relatively easy; rising values in themselves are a stimulant; holders have larger equities, which often encourage them to buy additional tracts; and farmers have in hand much more purchasing power than formerly. Moreover, returning veterans who use the credit provisions of recent legislation may become an influential factor in the land market.

Another development that could cause extensive change in the farm financial structure would be injudicious buying of new goods and equipment at excessively high prices. This buying could be done with cash balances built up during the war years and with credit. What gives point to this possibility is the very large accumulation of needs which will exist when the fighting stops. To make postponed repairs on houses, barns, fences, etc., and maintain their current condition otherwise, annual expenditures of 650 million dollars would appear to be necessary for several years. Wartime wear and tear or rising costs may greatly increase this amount. Then substantial sums are needed for modernization. Expenditures for farm machinery will be large. Filling the needs for motor vehicles alone at the end of 1944 might call for well toward a billion dollars. Large sums may be spent for household equipment and furnishings, particularly for electrical appliances. Surveys and data procured in other ways indicate that of the total spending the farmers have in mind for the 2 immediate post-war years, 7 to 8 percent will be for household goods.

In short, the stage will be set for a possible aggressive program of farm spending immediately after the war. To the extent that

such expenditure adds to the effective operation of farms the financial structure will be further strengthened. But to the extent that farmers reach for goods that are excessively high in price and that may prove to be inappropriate for later post-war needs, they will reduce the liquidity of their financial position without making compensating gains in adjustment to post-war conditions.

Flexibility of Farmers' Finances May Aid Later Post-War Adjustments

The rapid growth of quick assets—deposits, currency, and Government bonds—plus the reduction in debt has added an unusual element of flexibility to the farmer's financial position. Certainly this gain in flexibility will facilitate many of the readjustments which farmers may have to make after the war. At no time since World War I have farmers as a whole been so well prepared financially to make such changes as may become desirable in their methods of operation or in types of farming.

The readjustments that farmers will face in the later post-war period will be due in part to conversion (made necessary by differences in war and peacetime demands) which was postponed in the immediate post-war period; in part they will be due to maladjustments of longer standing which the war did not create and which peace will not correct but only accentuate.

Those who during the war turned to heavy production of crops like edible dry beans, rice, hemp, soybeans, and peanuts probably will have to make some readjustments. The same holds true for some growers of great staples like wheat and cotton. This may involve shifts into other types of farming as well as changes designed to lower costs of production. Whether such readjustments can be readily made will depend in part upon how successfully farmers have retained the liquid assets they built up during the war.

This whole question of flexibility in the conduct of farm operations—an advantage derived particularly from the accumulation of liquid assets and from the reduction of debt during the war—will have a considerable bearing upon farm income and the financial structure in future years. The ability to respond easily to changed conditions is very important to the financial welfare of the farm business, and the whole Nation benefits when resources can be readily directed to the production of the goods that are most in demand.

We may well be entering a new period of profound changes in markets for agricultural products. It is important not only to individual farmers but to the whole national economy that farm resources be conserved so as to be able to meet these post-war problems successfully.

Future Financial Structure Dependent Upon National Policies

No amount of adjustment by individual farmers, short of general curtailment, will avail to maintain a prosperous agriculture unless with the help of judicious national policies we are able to develop peacetime markets of greater absorptive power than existed before the war. Maintaining a demand for farm products at a level that will permit satisfactory earnings to the present farm population will be dependent on (1) achieving a high level of domestic purchasing power based on full industrial employment and (2) the development of a substantial volume of international trade.

The ability of the domestic market to take agricultural products at profitable prices under wartime conditions has astonished many. If it is possible to maintain a high level of purchasing power in the hands of the nonfarm segment of the population, a very large part of what the present agricultural establishment can produce will be bought at home, at prices that will maintain farm income at satisfactory levels. The conditions under which a high level of purchasing power can be achieved have been discussed elsewhere and are not part of this study. Here it is sufficient to emphasize the truth that the farmers' interest in high industrial activity is second only to that of nonfarm workers themselves. In an economy based on exchange, the prosperity of those who buy is essential to the prosperity of those who sell. This is true alike of domestic and foreign trade.

Essential conditions for the expansion of our foreign trade include: First, a policy of reducing or removing the barriers that now exist against a large variety of imports; and second, assistance through long-term credits and provision of capital goods to rebuild as speedily as possible the mutilated production systems of the warring and occupied countries. Each in its own way would provide purchasing power to potential foreign buyers of our products. The lack of such purchasing power in the form of dollar exchange before the outbreak of the war was a major cause of the unsatisfactory status of our export trade.

Summary

This examination of possible post-war developments in the financial structure of agriculture has emphasized the impermanent character of any given balance sheet and its susceptibility to change induced by developments both within agriculture and without. A close relationship exists between changes in the flow of farm income—actual or prospective—and changes in various items on the balance sheet. It is a two-way influence. Changes in farm income alter the financial structure whereas reciprocally, the financial structure helps to determine farm income through its influence on the ability of farmers to

adjust their operations to changing conditions of demand and cost. Moreover, the analysis suggests that prospects of future income influence the financial condition of farmers, leaving an imprint on the balance sheet as from time to time they cause changes in the value of land and other durable assets, and as they induce farmers to alter inventories of physical goods, spend or hoard cash, pay off or incur debt.

Any factor, therefore, that influences post-war farm income will also influence the post-war financial structure of agriculture. The way in which farmers adjust their operations to post-war conditions is such a factor. National policies that influence demand for farm products both at home and abroad are other factors. So are national policies that affect the supply of farm products or their costs of production.

Most of these policies will influence farm income through their effects on the price structure. Prices exert very great influence on the financial condition of agriculture. On the one hand, they are major determinants of farm income and through it they work changes in the assets and equities of farmers. On the other hand, they affect directly the valuations of important farm assets. It is this intimate relationship between prices and financial condition which makes the behavior of prices a matter of special concern to farmers.

U. S. GOVERNMENT PRINTING OFFICE: 1945

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington 25, D. C. - Price 10 cents